Inference at $*$ 1 2 1 2 1 1
of proof for Lemma adjacent-append:

1. T : Type
2. x : T
3. y : T
4. L_1 : T List
5. L_2 : T List
6. i : $\{0..((\|L_1\|+\|L_2\|)\text{ - }1)^-\}$
7. $x = (L_1 \mathbin{@} L_2)[i]$
8. $y = L_2[((i+1)\text{ - }\|L_1\|)]$
9. $\neg(i < \|L_1\|)$

$\vdash$ $((i\text{ - }\|L_1\|)+1) \sim ((i+1)\text{ - }\|L_1\|)$
by Auto'

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